

Lesson Plan

Name : Sanjula Yadav
Discipline : Common for all branches
Semester : 1st
Subject : Applied Physics
Code : 180013
Session : 2022-23
Work Load : 2 Lectures, and 1 practical per week

Day	Lecture Topic	Practical Topic
1.	Introduction about physics Physical quantities Units - fundamental and derived units	Familiarisation of measurement instruments and their parts, and taking a reading.
2.	Physical quantities Units - fundamental and derived units FPS, CGS and SI units	
3.	Dimensions and dimensional formulae of physical quantities	To find the diameter of solid cylinder using vernier calliper
4.	Dimensional formulae Distance, area, volume, velocity, acceleration, momentum, force etc.	
5.	Dim. Formula of work, power, energy, surface tension, stress, strain, moment of inertia	Revision & Checked practical note book
6.	Principle of homogeneity of dimensions conversion from one system of units to other	
7.	Limitations of dimensional analysis	To find internal diameter and depth of a beaker using vernier caliper and hence find its volume.
8.	Scalar and vector quantities – examples	
9.	Addition of Vectors,	To find internal diameter and depth of a beaker using vernier caliper and hence find its volume.
10.	Triangle and Parallelogram law	
11.	Vector Product,	
12.	Definition of Distance ,Displacement, Speed, Velocity, Acceleration, Force	
13.	Newton's laws of motion and Conservation of linear momentum	Revision & Checked practical note book
14.	Force, Resolution of force	
15.	Impulse and its examples	To find the diameter of wire using screw gauge.
16.	Introduction to Circular motion	
17.	Angular displacement, angular velocity, angular Acceleration	
18.	Relation between linear and angular velocity.	

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19.	Centripetal and centrifugal forces	
20.	Banking of roads (application of centrifugal force)	Revision & Checked practical note book
21.	Rotational motion with examples	To find the diameter of wire using screw gauge.
22.	Definition of torque and angular momentum and their example	
23.	Moment of inertia and its physical significance	
24.	Work, its units and types with examples Transformation of energy	To find the thickness of paper sheet using screw gauge.
25.	Energy and its units: Kinetic energy and potential energy	Revision & Checked practical note book
26.	Energy conservation law in case of freely falling body	To determine the thickness of glass strip using a spherometer
27.	Power (definition, formula and units),.	
28.	Simple numerical problem on power Energy and its units	
29.	Kinetic energy and potential energy	Revision & Checking of practical note books
30.	Energy conservation law in case of freely falling body	
31.	Power (definition, formula and units),.	To determine the thickness of glass strip using a spherometer
32.	Definition of deforming force restoring force, elastic body & plastic body	
33.	Stress and strain and their types	To determine radius of curvature of a given spherical surface by a spherometer
34.	Hooke's law,	

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35.	Different types of module of elasticity Pressure, Pascal's law	Revision & Checking of practical note books
36.	Surface tension: definition, its units, surface tension	
37.	Effect of temperature on Surface tension	
38.	Viscosity: definition, units and effect of temp.	
39.	Fluid motion, stream line and turbulent flow.	
40.	Definition of heat and temperature,	To verify parallelogram law of forces
41.	Difference between heat and temperature	
42.	Principles of measurement of temperature,	To determine the atmospheric pressure at the place by using Fortin's Barometer
43.	Different scales of temperature	
44.	Relationship between different temperature scales	To find force constant of spring using Hook's Law
45.	Modes of transfer of heat Conduction	
46.	convection and radiation	
47.	Properties of heat radiation	To measure room temperature using thermometer and converting it into different temperature scale.
48.	Principle and working of mercury thermometer	